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Home Computing WEEKLY

No. 44
Jan 29-16, 1984

40p

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RICHARD SHEPHERD
adventure games

Software reviews for:
Dragon, BBC, Spectrum, Lynx, VIC-20, Texas, Commodore 64

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PLUS: programs for Texas, Dragon, Commodore 64

AND: u.s. Scene, your letters, One Man's View...



W.H. Smith bars island adventure

All copies of an adventure game have been retained for exclusively W.H. Smith following a complaint that it involves copyright. Tapes of Espionage Island, a Spectrum game which has been on sale for 18 months, were being returned to Hull software house Artic Computing.

A spokesman for Smith said: "Our attention was drawn to it by a reader who writes and was upset about it. We followed his instructions and discovered it."

"I understand that it was not because of these words in the program are repeated in the particular program the only way to Continued on page 5

'Manopoly': Judge orders sales halt

A software company has launched an appeal to help Britain's legal battle with board game giant Waddington Games.

Acornsoft, now known for the Pegasus character in its games, has been ordered by a judge to stop selling its Go For Gold program.

It has been told by Waddington that it was Acornsoft's property under another name, for which there was already an undertaking not to publish.

Kevin Fisk, of Waddington, says: "They are talking on the back of a game we have had for 20 years. They know damn Continued on page 5

NEW RELEASE

The Guardian

25/95

ORIC SOFTWARE

BEHIND THIS SCREEN THERE'S A WHOLE

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• **WHEELS** (16K Spectrum)

An action version of the ultimate racing challenge, you find yourself in a complex world—a world full of obstacles! Move to leap and slide over the treacherous air and to get your feet on the ground is essential to find the elusive goalposts and then beat the 16 K Microsphere title.

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* if more programs about the quality of OCEAN's titles, then contact/telephone Ocean's in office.

Office: Colindale, Westly 2/2/82

• **ENSLAVED** (16K Spectrum)

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Send 20 stamps for
Spectrum Supermarket,
27 Abchurch Lane,
London EC4N 3JH

Briefly

Just out from Arcade is Bubble Trouble, a 44K Spectrum game which asks you take the role of a frogger trying to steal some princess. But game bubbles are out to stop your draining — but Arcade begs watching The Princess? With a cleared 50 screens and three levels, a jolly for £2.99. Coming soon from Arcade is an adventure game called The Zone which the copy says "may take you to hell". It will certainly have full screen high-resolution images, and a huge vocabulary.

Arcade Technology News, 37 Chesham Road, Croydon, Kent RM5 8DG

The Electron and BBC B are the new programs such from Atlantic. For the Electron, Bag-Man and Lunar Rescue cost £1.95, Final Machine £2.95, Prayers Time, an educational program is £2.95, and there's Scrite II, a word processor, for £9.95. Also at £9.95 for the BBC B are Distributions, Eagle Empire, and educational programs Primary Time and Primary Art. Cosmos Design costs 2000. An added bonus for Spectrum Distributions: the highest scoring player wins an all-expenses-paid trip to Hollywood in West Germany, some of the Distributions and in World War II.

Atlanta, 178 West Street, Sheffield S1 4BT

Ellen has brought out three books for owners of Commodore micros. 34 VIC-20 Computer Programs for Home, School and Office costs £7.50. Also at £7.50 are 104 Programming Tips and Tricks for the VIC-20 and Commodore 64, and Commodore 64/VIC-20 Computer Programs for Beginners.

Ellen Electronics, 17 Bay New Road, Farnham, Wiltshire SN7 8JZ

Computing fans in the West Midlands will be glad to know that a new Spectrum store is opening soon in Walsall.

Atlanta, 16 Broadway Street, Farnham, West Midlands, WS7

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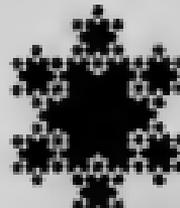
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Play this game on your
Spectrum — just turn to page 17
and type in our listing



You can do this with your BBC
micro and printer. The listing
on page 17 creates snowflakes in
shades of grey



We review more software than
any other magazine. In this
issue we review paint (two titles)
in products. Read before you
buy...



This is a useful address book...
so it will be once you've typed in
the Spectrum listing which
starts on page 34



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12/85

— ONLY AT THE NATIONAL FOUNDATION —

'Monopoly'

From front page

well as the other game, it's over." Washington, which also produces Claudio, Topopoly, Saboteur, Artimation, games and playing cards, licenses Monopoly from the American company Parker Brothers.

There was plans to bring out software this year, said Mr Fitzhugh.

Mr Crocker, of Antenna, said more than 80 software houses had given cash or pledges at the Year Computer Show in December to help cover legal costs, which could amount to £9,000.

Mr Crocker said: "I say stop Go To Jail in a copyright audio

cassette on sale by mail order and a computer chips and a member of the public can have it with a large board game that consists of a ring. It enables the Spectrum to play the game, there is an unusual difference.

"If I was Washington I would have brought out a computer game of Monopoly two years ago, or licensed someone to do it. There are 13 versions of a property trading game on the market at the moment."

Washington has been pressed throughout the year to full bearing over the issue, due at the end of the month.

Mr Fitzhugh said: "We don't want to litigate people. We just want to be protected."

"When did the fellow get the idea? Where back on that one?" This is what the hearing is all about. If he's to please why doesn't he think of his own idea?"

Shops complain over Spectrums

Shops have complained that while they could not get through Spectrums to meet demand, Sinclair Research has been selling them out the country at its Camberley distributor premises.

Shop-keeper Roymary Harris, of Look and See in Shipton, North Yorkshire, and personal customers had been queuing down to the way to 30 miles to find shops with stocks.

She said: "I think it's an absolute disgrace. Apparently at Camberley you can buy in mass at you like and we're being turned away customers for stock waits."

"I would have thought they would have made sure there were enough for their customers."

A Sinclair spokesman said: "It's perfectly true. We did hold back a block of stock against mail order sales."

"Many people are prepared to drive a long way — sometimes from Wales and Scotland — and when people drive that far you can't turn them away."

"We may have been getting 50-60 a day. We are talking about the low thousands, we are not selling them in the thousands. It's just a little customer service."

In the three months to October 31 Sinclair had sold 100,000 computers, 90 per cent of them Spectrums. He said: "It's been quite extraordinary. Everybody has underperformed — retailers and manufacturers."

Adventure bar

From front page

got paid the help is to return at

But Amco's company secretary, Margaret Turner — mother of

Sir Clive's next micro

Sir Clive Sinclair's next computer will cost about £200 and use Motorola's 68000 16-bit processor.

The details come from an HCN source who is usually reliable. The new store, said to be due for launch in late spring, is also believed to have more RAM than any other home store now on the market and, as reported, two Microchips built in.

Screen resolution will be 256 by 512 with 16 alternatives per pixel. It is said that one of the UK's leading software houses is already working with a prototype.

If all the details are accurate, it means that Sinclair Research is turning its attention to the upper end of the home market — occupied by machines like the BBC micro and the Commodore 64.

founder Richard Turner — and the appeal by Smiths came as a surprise to her.

She said: "We didn't know anything about it. It's perfectly harmless. It's very unfair. We have had many letters of complaint about the program."

"As a certain point of you copy with a rule word you get a money response, but not with a word word. Most people would get through the whole game without reaching this point."

In fact, the mad, at the point in the program the correct response would be to give the woman a string of beads and the beads over a knife's to be used kept in the program.

Flight fight

There's just 21 minutes to destroy the remaining three in CRL's one flight simulator for the real Spectrum. The Omega Run Writers by Richard Brantome, editor of Galactic Patrol, a feature 10, lasers, 84k and re-balling from a laser missile. The Omega Run costs £5.99 and Commodore 64 version is promised soon.

CRL, 2 Kings Road, Capeside Road, London E15 3AD

You could be on our pages

We welcome programs, articles and tips from our readers.

PROGRAMS must always be sent on cassette. Listings are helpful, but not necessary. Check carefully that they are bug-free. Include details of what your program does, how it works, variables you have used and hints on conversion.

ARTICLES on using home computers should be no longer than 1,000 words. Don't worry about your writing ability — just try to keep to the style in HCN. Articles most likely to be published will help our readers make better use of their micros by giving useful ideas, possibly with programming examples. We will convert any sketched illustrations into finished artwork.

TIPS are short articles, and brief programming routines which we can put together with others. Your hints can aid other computer users.

Competitive rates are paid.

Keep a copy of your submissions and include an SAE if you want them returned. Label everything clearly and give a daytime and home phone number if you can.

Paul Lipsett, Home Computing Weekly, No.1 Golden Square, London W1S 3EJ

Don't you believe it

Two of Britain's best-known software companies have gone from it a few years — but fast.

The details were kept secret until the dramatic announcement by Reynolds' bossman at a formal dinner at London's Hilton Hotel.

Leading figures from the industry found that Quixote's and Bug-Byte had formed a new enterprise called Quix-Byte.

Already, 200 orders were set to open in the UK — with more to many planned for the US — following a surge in orders at an experimental centre in Wexham and Field town in Torridge and Yorkshire.

The event was also the occasion for an awards ceremony — and Home Computing Weekly and its editor each accepted an award.

It's too good, — Fort Type on...
Each the best/least recommended awards were well-staged speech.

There's not a word of truth in the Quix-Bite announcement and all the "awards" were jokes.

The jokes were dropped up by Rod Conway, managing director of Quixote's, and Jeff Phelps, Quixote's sales manager.

All the ingredients were there, including well-timed comments and specially-designed menus featuring the "Quix-Bite" which turned out to be a fairly ordinary meat ball.

It appeared as though that the software industry was alive with excitement that, perhaps, the two companies were about to merge or reach a firm distribution agreement.

But the laughs, here are the awards. But remember that all of them were awarded in a spirit of fun. Each of the "nominations" is given with the award written in bold type. The first two awards awarded privately.

Prize of the Year. An PC, to stimulate the software industry. An award for software that is highly recommended.

Best Advertising Award. Simple, clear, effective. An award for software that is highly recommended.

Prize of the Year. An award for software that is highly recommended.

Prize of the Year. An award for software that is highly recommended.

"Amiga" — software. Companies for All. The job of the award was to be given to the best software company of the year. The award was given to the best software company of the year. The award was given to the best software company of the year.

The award was given to the best software company of the year. The award was given to the best software company of the year. The award was given to the best software company of the year.

All the awards, for best, were "Given", like the firm industry's. The award was given to the best software company of the year. The award was given to the best software company of the year.

The award was given to the best software company of the year. The award was given to the best software company of the year. The award was given to the best software company of the year.

Ad aggro

Adver Electronics, Oco, Deane, Commodore and Quixote's are just some of the companies to come under fire from the Advertising Standards Authority recently for misleading adverts.

The ASA was reacting to complaints from members of the public, and several of the complaints concerned that ad buyers — advertising goods that aren't actually available.

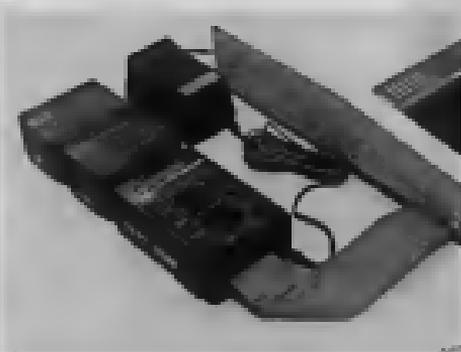
Adver found itself in hot water over the new electronic Puffer keyboard. It replied to its ad that the PDS was in stock and would be delivered within 30 days.

In fact, Adver had had trouble in getting hold of the keyboard over since it was first launched in March 1983. Puffer had repeatedly said that stocks would be available within 30 days to two weeks, but none had materialised.

The ASA told Adver that it should make it quite clear in its ads if a product was not immediately available.

Quixote's and Commodore were both criticised by the ASA for advertising goods that aren't available — Quixote's for its Tractor game and Commodore for its Potapod computer.

A member of the public disputed that claims made in a brochure for Oco, which has been the subject of those other



All the BBC's interfaces, you can get from DCP

About Interface

If you want to get more out of your BBC micro, DCP has brought out a range of plug-in and plug-together units giving the ultimate interface you need for control and monitoring applications at home, school and work. The more interfaces you...

which costs £29.95, provides four relay outputs, four relay inputs, eight bit input, and output ports and an eight-channel analogue to digital converter. It costs twelve times more than the...

And to play too that are analogue-digital and digital-analogue converters for £19.95 each. DCP's 25 Station Close, Longwood, Norwich NR12 4EX.

complaints during the past year. The brochure claimed that the Oco recorded clock rates and could save data and errors, that 40 characters per line could be displayed, that the Oco communications system was available and British Telecom approved, and that the Oco user manual had "over 200 pages". The complainant read all these

claims were untrue, and Oco didn't reply. It was told to send its way in future brochures.

It was the Oco that got Quixote into trouble, too, over ads that said that the machine was "exclusive to Deane" and "at an amazing low low price" when it wasn't. Deane admitted that the ads were untrue, and promised not to run them again.



New voice for the VIC

AndOr Systems of Dublin has brought out a new speech synthesizer unit for the VIC-20 and Commodore 64, called the Comospeak.

Like the Adman speech synthesizer for the VIC, the Comospeak can be programmed using speech wave coded algorithms, which can be built up to give an unlimited vocabulary — in theory, at least.

Unlike the Adman, a novel

voice cartridge slot fits by plugging into the expansion socket. Speech is channelled through the TP's speaker.

At £25, it's also cheaper than the Adman. It comes with a program cassette, manual and an in-depth programmer. A PC version is also available.

AndOr Systems, 28 Millers Lane, Rosslinpark, Dublin 14, Ireland.

£2,000-worth of RICHARD SHEPHERD adventure games must be won



Just find the missing link words and you could be among the 150 winners of great Richard Shepherd adventures.

We've got 12,000 words to give away for the Spies, Dragon II and Commodore II!

They are the top sellers. Tasty! Tasty! Tasty! Spies, Dragon II and Commodore II!

Fifty winners will each receive two tapes and 100 minutes will get one winner.

All are available for the Spectrum, Transvision Tower and Super Spy are also available for the Dragon II and Everest Ascent and Step of the Law are available for the Commodore II.

How to enter

There are 15 words in pairs of words

missing from the following story. Using the clues in the artwork, write the 15 words on a sheet of plain paper in the order in which they appear.

Attach the sheet to the fully completed coupon and envelope it in an envelope.

Impressively, write to the back of the envelope the number of letters beginning with the letter J.

Post your entry to Richard Shepherd competitions, Home Computing Weekly, No 1 Chelsea Square, London W8 1AB.

Entries close at first post on Friday January 21.

The winners of each tape must win before first 10 correct entries appear and 100 winners of our tapes will not be the usual 100 correct entries appear.

Do not forget to name your choice of two adventures — along with the computer you own.

Winners of single tapes will get the cost they named. But

Copies of the coupon will not be accepted. The address and the names of the winners will appear in the next volumes of Home Computing Weekly and the prizes will arrive from Richard Shepherd before noon within 24 days of the publication of that issue.

Cheques, mortgages and sheets of paper which are not fully completed will be discarded.

The rules

Twelve thousand words (12,000 words) given at once on Friday January 21. Will not win the prize. Copy completed and paper which are not fully completed will not be considered.

Prizes will not be awarded from winners of Alpha (Special) Prizes from Richard Shepherd II (Dragon and Alexander Panov's I Love. The winners also apply to members. Family and again to the computer.

One there, Super Spy is mentioned as the bottom story we don't know old adversary He boards the waiting and boards for the mysterious inevitable the only clues are on the of Koro which leads him to the near the Our hero starts up his for adversary ready to pounce Crash! Boom! the ground and makes a cloud of smoke into the air. Dr Death senses the danger and traps down the secret path. Two months later our hero is still on the trail. This time on the hazardous slopes of Mt Dr Death has an up to to capture his evil work, protected by the Super Spy has to up the mountain with his team of and a surprising distance who can stop on a patch of and falls down a of at the base of Transylvanian Tower. He feels a prodding in his back, and as he turns over to face the water "Come on John it's night o'clock and you'll be late", says his mother. It seems our hero has invented and our story has just been an "Adventure into Imagination".



Richard Shepherd competition
Entry Coupon

Name: _____

Address: _____

_____ post code _____

Prizes I would like to see the computer they run on:

1. _____

2. _____

Write this 15 words on a sheet of paper in the order in which they appear, and attach it to this coupon. Post to Richard Shepherd competitions, Home Computing Weekly, No 1 Chelsea Square, London W8 1AB. Closing date: Friday January 21. Do not forget to write on the back of the envelope the number of letters beginning with the letter J.

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N.O.W...

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Introducing the revolutionary H.U.R.G. — the ultimate game programmer. People who love creating new games. Who want to do something that you will never see before, create your own game, this one does it for themselves.

HIGH LEVEL — requires no programming skills — simply design the screen you want, and H.U.R.G. will generate them into the most amazing adventures and puzzles that ever. Choose any setting for your game, they mean to order speed to create a scene — the only limit is your imagination.

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Quickly Mastered — H.U.R.G. enables you to design and store the game you create on cassette, and play them later using H.U.R.G. or any suitable computer. It's that easy — create your own world today!

Now you can create all the stunning sound effects on your Spectrum that up until now have only been available to professional software houses.

BONUS

To really fire your imagination, H.U.R.G. includes three ready-to-play features that sound games, created using H.U.R.G.

Design a Game... WIN £3,000

Each month up until April 30 1984, three prizes will be awarded every month for the best game of the month. At the end, the best game will win a grand prize of £3,000.

YOU could be a famous game designer! Every entrant has the opportunity of being published by Melbourne House and earning royalties.

Details of the competition are available with H.U.R.G.

COMPETITION

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THE SPECTRUM Collection

H.U.R.G.	£174
The Hobbit	£174
Panorama	£8
Tower-Dark 40	£8
Melbourne House Computer Bridge	£18
Abercromb Path	£14

TOTAL £ 2

I enclose my cheque money order for £

Please debit my Access card/no

Expiry Date Signature

Name

Address

Postcode

H.U.R.G. will be officially released in mid-December 1983. Get your order in now, receive your copy so that you can be among the first with this revolutionary software! Access orders can be telephoned through 24-hour 24-hour operators (01) 534 1287

Melbourne House

Get it down in black and white — and grey

The screen dump program for the BBC micro plus NEC-8023 printer goes one better than the usual black-and-white screen dump — it dumps the screen in four shades: Truest and black, dark grey, light grey and white.

The program does this by looking at each pixel on the screen in turn, and deciding what the logical colour is from the displayed colour, so forcing those who hate printers using VGA 256

This isn't just any old screen dump program. It'll make your printer copy the display in shades of grey, as its author Russel Calbert explains

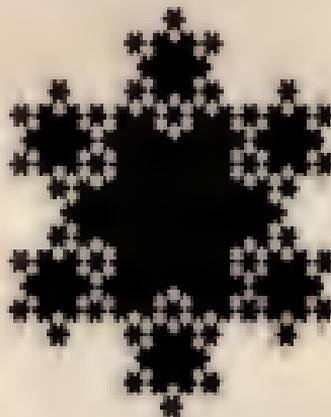
An example of the screen dump program's output

Main variables

- 1% line of screen being output
- 1% pixel of 1% being output
- 1% horizontal position of byte being output
- 1% line type of pixel
- 1% second type of pixel

To get the different shades, the printer head has to move twice across the paper. Thus, the fact that each pixel has to be calculated, means that a SCREEN 1 screen dump can take upwards of 10 minutes.

In writing the program it was made code well suited to use, but I write it in BASIC, so that it could be easily converted for other printers.



How it works

- 0000 enter graphics mode to format bit control, enable bit to be printed anywhere
- 0001 move graphics cursor off screen to anything printed should affect printer
- 0002 enable printer and output line
- 0003 with line spacing on printer so the 144 cells on 60 spaces between lines
- 0004 wrap down the screen 32 lines
- 0005 move graphics cursor off screen
- 0010 enter the image printer mode on printer, and tell it to output the bytes of information from the top line of graphics
- 0011 wrap through horizontal resolution
- 0012-0019 read half of the line and output all that goes to printer. Note: to change the number in line 0012-0019 you can change what shade is output for the colour of the pixel
- 0020 output 1% of 1% in printer to end of each horizontal line
- 0021 move printer line spacing on 1% each and display printer

```

10 SCREEN 1
20 LINE INPUT "LINE NO.:";LN
30 LINE INPUT "PIXEL NO.:";PX
40 LINE INPUT "HORIZONTAL POSITION OF BYTE BEING OUTPUT:";HP
50 LINE INPUT "LINE TYPE OF PIXEL:";LT
60 LINE INPUT "SECOND TYPE OF PIXEL:";ST
70 SCREEN 1
80 SCREEN 1
90 SCREEN 1
100 SCREEN 1
110 SCREEN 1
120 SCREEN 1
130 SCREEN 1
140 SCREEN 1
150 SCREEN 1
160 SCREEN 1
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810 SCREEN 1
820 SCREEN 1
830 SCREEN 1
840 SCREEN 1
850 SCREEN 1
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870 SCREEN 1
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910 SCREEN 1
920 SCREEN 1
930 SCREEN 1
940 SCREEN 1
950 SCREEN 1
960 SCREEN 1
970 SCREEN 1
980 SCREEN 1
990 SCREEN 1

```

```

1000 SCREEN 1
1010 SCREEN 1
1020 SCREEN 1
1030 SCREEN 1
1040 SCREEN 1
1050 SCREEN 1
1060 SCREEN 1
1070 SCREEN 1
1080 SCREEN 1
1090 SCREEN 1
1100 SCREEN 1
1110 SCREEN 1
1120 SCREEN 1
1130 SCREEN 1
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1180 SCREEN 1
1190 SCREEN 1
1200 SCREEN 1
1210 SCREEN 1
1220 SCREEN 1
1230 SCREEN 1
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1880 SCREEN 1
1890 SCREEN 1
1900 SCREEN 1
1910 SCREEN 1
1920 SCREEN 1
1930 SCREEN 1
1940 SCREEN 1
1950 SCREEN 1
1960 SCREEN 1
1970 SCREEN 1
1980 SCREEN 1
1990 SCREEN 1

```

The Towers of Hanoi revisited

Here's how Don Thomasson solved a fascinating old puzzle on his Spectrum. Try it for yourself and see

The Towers of Hanoi is an old problem, involving a number of discs of different sizes which may be arranged in three piles.

No disc may be put on top of a disc smaller than itself. The problem is to start with all the discs on pile one and transfer them to pile three.

Academic analysis of this problem has suggested a need for a recursive process, a substantive which calls itself, for example. Impassioned methods have been proposed, but they are difficult to explain or justify logically. The target here is to avoid these extremes.

The program was adapted from a Fortran version, so it has a clear modular structure. The main subroutines do recursive moves, and then call three table routines. Subroutine 1000 puts up the title display, 1200 introduces the screen, and 2000 moves the disc.

Two arrays are used, A(2,3) is used as a 'stack' to hold data defining pre-calculated moves. A(2,1) holds the number of the disc to be moved, A(2,2) holds the number of the pile from which it is to be taken, and A(2,3) holds the number of the destination pile. The array P(2) holds the number of discs on each pile.

Subroutine 1200 asks how many discs are required, and sets up the screen accordingly. Up to 12 discs can be handled, but it should be noted that every extra disc doubles the time taken to perform the moves. All 12 will give you something interesting to look at for about 40 minutes.

The 'track pointer' SP is set to 1, the base line is drawn in, then subroutine 1800 draws the discs on pile 1, using subroutine 1600 to draw each disc. This subroutine is also called by subroutine 1800 to rub discs out and re-draw them in a new place, as it works as ON/OFF mode.

Suppose the initial stack entry is 4, 1, 3, meaning that four discs are to be moved from pile 1 to pile 3. Before the disc can be moved, the first three discs must be on pile

pile 1, so the move 3, 1, 3 is needed. To show that, the first two discs must be on pile 1. To allow that, the first disc must be on pile 2.

Thomasson's are worked out by subroutine 1000, which creates new 'stack' entries from the previous stack entry. It does so by decrementing the disc number, copying the number of the source pile, and making the destination pile the one not provided in the previous move. Some of the pile numbers add up to 4, the destination pile can be found by subtracting the pile numbers in the previous entry from 6.

The first two moves are straightforward. Disc 1 goes on pile 1 and disc 2 on pile 2. We now need to move disc 3 to pile 3.

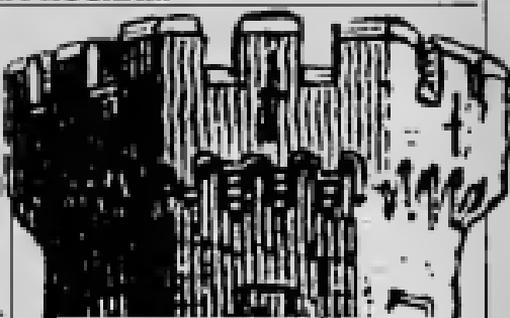
As the previous move did not involve disc 1, subroutine 1600 is called. This looks at the last move, decrements the disc number, finds the destination pile unblocked, and makes the space pile the one not used last time. Note that this modifies a lot of stack entries, rather than adding an entry.



As the new move involves disc 1, we carry it out, and then move disc 3 to pile 3. Subroutine 1200 then works out the moves needed to put the first two discs on to disc 1. And so on.

Most of the time taken to enter the discs is taken up by the drawing and erasing function. If you were faster across, you might try another way of doing this, perhaps by using block graphics, though that would probably limit the number of discs.

Even as intended, moves are not really quick, especially if you want to see what is happening more clearly, you may like to put in a delay at the end of subroutine 1000.



```

1000 DIM TOWER$(3,10)
1010 DIM N(12)
1020 GO SUB 1030
1030 GO SUB 1040
1040 GO SUB 1050
1050 GO SUB 1060
1060 GO TO 20
1070 REM *****
1080 REM *****
1090 REM *****
1100 PRINT BY 20.0,"THE TOWERS O
1110 GOTO 1
1120 PRINT BY 20.0,"THE TOWERS O
1130 GOTO 1
1140 REM *****
1150 REM *****
1160 REM *****
1170 REM *****
1180 REM *****
1190 REM *****
1200 REM *****
1210 REM *****
1220 REM *****
1230 REM *****
1240 REM *****
1250 REM *****
1260 REM *****
1270 REM *****
1280 REM *****
1290 REM *****
1300 REM *****
1310 REM *****
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1350 REM *****
1360 REM *****
1370 REM *****
1380 REM *****
1390 REM *****
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1560 REM *****
1570 REM *****
1580 REM *****
1590 REM *****
1600 REM *****
1610 REM *****
1620 REM *****
1630 REM *****
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1650 REM *****
1660 REM *****
1670 REM *****
1680 REM *****
1690 REM *****
1700 REM *****
1710 REM *****
1720 REM *****
1730 REM *****
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1760 REM *****
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1780 REM *****
1790 REM *****
1800 REM *****
1810 REM *****
1820 REM *****
1830 REM *****
1840 REM *****
1850 REM *****
1860 REM *****
1870 REM *****
1880 REM *****
1890 REM *****
1900 REM *****
1910 REM *****
1920 REM *****
1930 REM *****
1940 REM *****
1950 REM *****
1960 REM *****
1970 REM *****
1980 REM *****
1990 REM *****
2000 RETURN

```

Unlike most other popular home computers, the BBC micro does not have a CIRCLE command in its BASIC interpreter. However, with a little knowledge of trigonometry, it's very easy to produce circles, ellipses or even polygons, in a variety of plotting styles.

My first program shows the basic method used to produce a circle.

The program requests input for the radius and the number of sides for the shape. It then calculates an X,Y co-ordinate for each point around the circumference of the circle using SIN and COS functions.

Because computers work in radians, line 90 is used to convert degrees to radians.

Experiment with Program One using different values for radius and step. Note that a lower step value produces a more accurate circle, while a higher step value produces a less accurate circle but at a much faster speed.

The program uses a plot off function to plot individual dots

Make magic circles on your micro

The lack of a CIRCLE command is no barrier to drawing circles, ellipses or other shapes on your BBC, as Geoff Turner explains

around the circle. However, a draw function could be used to produce a continuous circumference.

Having mastered the basic techniques, you can then enhance Program One to produce a variety of different shapes. Using

a value of 120 for the step would produce a three-sided shape or triangle, or a value of 72 would produce a pentagon.

Instead of using a fixed radius, we can use a length and width to produce elliptical shapes.

And using some of the array

plotting functions available on the Beas will produce a variety of different effects. Plot 10 can be used to produce filled-in circles, for example.

My second program uses several random values to produce an ever-changing pattern of different coloured shapes, all based on the method used in Program One.

Note that initially the X,Y co-ordinates are calculated and stored in an array. This speeds up the program considerably as there's no need to calculate the values for every shape plotted.

The program produces an on-screen demonstration of the Beas's excellent graphics facilities.

Program 1 — main variables

X(0),Y(0) X and Y co-ordinates

R for each digit

A & B converted to zero position

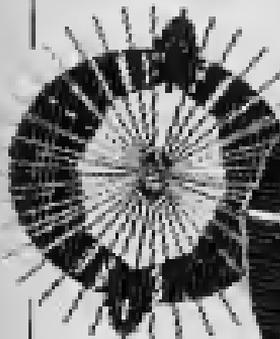
R size from zero

W length of shape

H a width of shape

N number of sides

Some of the shapes you can draw



Program 1

```

10 REM PROGRAM 1
20 REM CIRCLES
30 CLS
40 INPUT "RADIUS 100 TO 500 ",radius
50 INPUT "STEP FACTOR",step
60 MODE 2
70 FOR D=0 TO 360 STEP step
80 R=RND(1)
90 X=radius#SIN(R)
100 Y=radius#COS(R)
110 PLOT 69, X+600, Y+500
120 NEXT
  
```

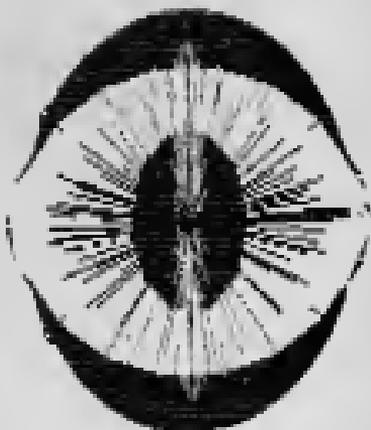
Program 2

```

10 REM PROGRAM 2
20 REM RANDOM PATTERNS
30 REM #####
40 REM CALCULATE BY CO-ORDINATES
50 DIM X(24),Y(24)
60 FOR I=0 TO 240
70 R=RND(1)
80 X(I)=SIN(R)
90 Y(I)=COS(R)
100 NEXT
110 REM #####
120 REM DRAW RANDOM PATTERNS
  
```

```

130 MOVE
140 A=500:B=500
150 MOVE A,B
160 REPEAT
170 GCD: RND(5)=.1,RND(15)
180 MOVE A,B
190 P=RND(15)
200 IF P=1 THEN P=25
210 IF P=2 THEN P=5
220 IF P=3 THEN P=24
230 M=RND(500)
240 M=RND(500)
250 S=RND(15)
260 PER D=0 TO 340 STEP INT(360/S)
270 PLOT P, M+(D)*500, S+(D)*500
280 MOVE A,B
290 NEXT
300 UNTIL FALSE
    
```



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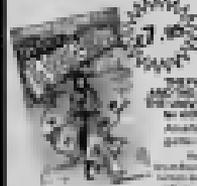
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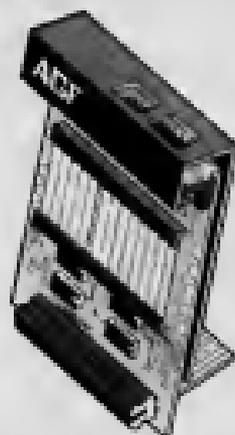
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Top 30

1	Maric Miner	Bug Byte	Spectrum 22
2	The Hobbit	M House	Spectrum 48
3	Veritas	Legend	Spectrum 71
4	Jetpak	Ultimate	Spectrum 46
5	Hunchback	Cosac	Spectrum 1-4
6	3D Art Attack	Quadrivia	Spectrum 1-4
7	Kong	Cosac	Spectrum 22
8	Lunar Jetman	Ultimate	Spectrum 23
9	Zoozoo	Imagine	Spectrum 1-4
10	The Hobbit	M House	CBM 64 1-4
11	Hunchback	Cosac	CBM 64 1-4
12	Hunchback	Superior	BBC 1-4
13	Falcon Patrol	Virgin	CBM 64 1-4
14	Horror goes singing	Fidel	CGM4 1-4
15	Horror Attack	Corvus	Spectrum 1-4
16	Frogger	Microdeal	Dragon 1-4
17	The King	Microdeal	Dragon 210
18	Garbhart in the Jungle	Microdeal	Dragon 241
19	Alio Also	Ultimate	Spectrum 21
20	Sirius	Amiga	CGM4 1-4
21	Aradia	Imagine	VIC 20 1-4
22	Kong	Amiga	CGM4 1-4
23	Hunter Killer	Protek	Spectrum 1-4
24	Wing Knight	BBC Soft	BBC 1-4
25	The Hobbit	M House	Oric 1-4
26	Overground Flag	Fidel	Spectrum 1-4
27	Knights of Kaktus	Futura	Dragon 1-4
28	Cluck egg	ABP	Spectrum 81
29	Jetpak	Ultimate	VIC 20 1-4
30	Team Knighton Valley	Bug Byte	Spectrum

Compiled by PCS Distributors (224 21211) and
sponsored by the Computer Trade Association.
Chart is for retail sales in individual outlets in the UK
and Northern Ireland for the fortnight ended
January 18

Top Ten programs for the Spectrum

1	Alio Also	Ultimate 71
2	Lunar Jetman	Ultimate 22
3	Art Attack	Quadrivia 22
4	Jetpak	Ultimate 1-4
5	Pyramid	Parsons 1-4
6	Kong	Dean 1-4
7	Death Chase	Micro Mega 10
8	Overground Flag	Fidel 116
9	Maric Miner	Bug Byte 94
10	Pool	CGS 1-4

Compiled by MCH Smith. Figures in brackets
are last week's positions

Top Ten programs for the VIC-20

1	Jetpak	Ultimate 71
2	Carvin Baseball	Imagine 21
3	Aradia	Imagine 22
4	Melody Walker	Imagine 91
5	Endrunner	Litersoft 23
6	Sky Hawk	Quadrivia 99
7	Amok	Audiotronic 151
8	Kaktus	Audiotronic 22
9	Tomb of Drava	Audiotronic 1-4
10	Spino	Audiotronic 1-4

Compiled by Webster. Figures in brackets are last
week's positions

Top Ten programs for the Commodore 64

1	Frogger	Interceptor 11
2	Aradia	Imagine 1-4
3	Bombman	Interceptor 21
4	Hover Game	Litersoft 1-4
5	Meat Mania	Audiotronic 22
6	Cray King	Interceptor 24
7	Quack Talking	Merrow 25
8	Endrunner 64	Litersoft 1-4
9	Hungry Horace	M House 72
10	Purple Turtle	Quadrivia 22

Compiled by Webster. Figures in brackets are last
week's positions

Top Ten programs for the Dragon

1	Garbhart goes Walking	Microdeal 171
2	The King	Microdeal 22
3	The Champion	Protek 1-4
4	Talking Android Attack	Microdeal 20
5	Petrigrow Diary	Shards 22
6	Dragonfly 2	Houses 21
7	Mixed Out	Quadrivia 25
8	Dragon Trek	Rosenfeld 21
9	Frogger	Microdeal 1-4
10	Endrunner	Satanstiller 1-4

Compiled by Webster. Figures in brackets are last
week's positions

Top Ten programs for the ZX81

1	Endrunner	Quadrivia 1-4
2	Invaders	Quadrivia 1-4
3	Football Manager	Audiotronic 1-4
4	Chess	Shards 10
5	Sirius	Quadrivia 22
6	Autobird	Quadrivia 21
7	Motherbird	Shards 21
8	Space Rancher	Shards 21
9	Iron Game	Protek 172
10	Cray King	

Compiled by Webster. Figures in brackets are last
week's positions

Bring your friends to book with your Spectrum

Turn your computer into a giant address book and keep your friends in order.
David Nowotnik explains how it works

If you only want to keep a few names and addresses of friends on file, then an address book will serve that purpose adequately.

However, if the number runs into tens, or even hundreds, then you could get into an awful mess with a book.

This is when a home computer will help you, and if you have a ZX Spectrum or ZX81 then you can use my Address Book program to create and store a file of names and addresses, and use the power of the computer to extract the information you want.



How it works

79-09F activates file variables
79A-79B main menu
400-470 SAVE the program and data on tape
500-550 check for a floppy sub-routine
600-670 enter details of a new record
700-770 enter search pointer
870-970 search routine
980-970 system menu is stored
1000-1070 routine to amend a record

When you use the program for the first time, start it with RUN. This will create a blank file, and calculate the program ready for use. It is a simple program to use, there are just three options in the main menu.

Main variables

401 the area which holds the file
402 the area holding the last (zero) names
A number of records
97 all local variables

```

00 000 Address Book
00 001 My home number
00 002 0420, 1980
40 000
50 000 Enter the file
40 000
50 000 0400, 100
60 000
60 000 File name
100 000
100 001 041,01
100 002 0411,"Mr James"
100 003 0412,"17000 road"
100 004 0413,"100000"
100 005 0414,"0400,100"
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U.S. SCENE

The Valley's nerds are on the way out

It takes a great deal of the work by aggressive pay observation for which it did not claim credence. But with which it concur.

It has become increasingly clear during the past year or so that the Silicon Valley, if not the entire microcomputer industry, is holding firm well to the west. If not entirely gone, the days of the silver haired baronies spectacular who had are certainly numbered.

As to what sort of person is going to occupy the north's former positions of power, this too is clear. It will be men from business backgrounds from virtually any other industry as long as that industry has nothing directly to do with silicon.

Expansion of whatever it is that has been or can be considered as silicon, is a clear that the new leaders are men who think in terms of the bottom line.

I suppose if the industry becomes more "business" that this may demand to happen sometime, and yet I wonder if becoming business is all that much of a virtue. Although they may have locked their minds and business sense, at least those men were innovators. And if there is one characteristic that business men do not usually possess for it is innovation.

There isn't doubt what the industry will lose as a "business" if what it gains in professionalism and efficiency may be more than offset by the lack of some applications. When firms headed by computer, the trend was for most responsive administrators that could get to new and unusual ideas of how to expand marketing of the firm.

As the search for a new way to create the Valley, I foresee the "top line" increasing between the time when approval is required to work on a new application and the time when that approval of industrial American concerns is finally received. The advantage of the "top" management jobs possessed by the American which means they may formerly innovative companies may be managed to death. After all, too of other people value the contribution of the new before it is too late.

Otherwise, it is not as if we will siting around in another year or so and wonder, as we have already started to wonder about other aspects of American industry what went wrong.

★ ★ ★ ★

It'll be a while with a promotion of some of the best hardware (high-way mail order business in the country)

I do more often supply, program, and hardware purchasing by mail order, and I get a lot of promotion mail and catalogs in it. Usually the first deliver a special message.

I see by their list of the they are now calling themselves the "new" computer mail order firm in the world, and I can only believe it. They will take foreign orders and will accept the usual credit cards. They deliver now a excellent. There also do not let it, something in one of stock they are so, and will not estimate in delivery date if they are not sure they can meet it.

They think peripherals, supplies, hardware, and software for every major personal computer and lots of software and some peripherals for home computers.

Let I keep you in suspense for too long, the name of the firm is called **Compu-Lab** (formerly Computer Exchange), P.O. Box 27086, Portland, Oregon, (503) 241-0300 or (503) 247-1289.

The last message is self-free but only the reasonable U.S. (sorry about that).

If you wish to them, I am sure they will send you a catalog and order direct free of charge. Here's what's worth the effort.

See you next week

Bob Ross
Fairfield, California

Apostrophe 48K Spectrum £7.95

Verdax Research, 21 White Road, Cambridge CB1 2AQ

This is not intended to be a teaching program, but rather a practical tool of course type based on the use of the apostrophe.

It contains seven instructions and contains only 18 short examples of use. Without instructions can be used by the user as an option.

You distinguish a blanked to drop a "word", the apostrophe, into the correct place in the sentence. If this process is completed often enough, you get the "reward" of playing a rudimentary arcade style game.

If you fail three enough, you are shown the correct answer. A

certificate of success is printed by the ZX Printer if attached.

This will usually normally be linked with children of 11 years and older. Will they really be attracted by "game look" screens, keyboard and tape support?

Though some use of made of large characters and even a few defined apostrophes, when the program are printed, as in the normal Spectrum character set and the apostrophe is all but lost on the Spectrum's character screen.

instructions	10%
sound/see	9%
display	4%
value for money	8%



The key to learning?

More and more educational software is coming on to the market. To help you decide where to spend your money, our reviewers have tried out five of the latest tapes

Mr T's Alphabet Comes 52K BBC £12.95

Elmer Software, 73 Broadwalk Street, London W1V 2BP

This package of two games is aimed at the three to six year olds who are about to learn and is meant to be used before school and learning to read.

Like several other educational software, the program doesn't cover an area comprehensively or even well. Rather, it provides a taste of the area in the hope they do learn more.

The program are of excellent quality. In this case it's simply that without (poor) instructions help, which is something a parent problem then have to use them?

Let's have a closer look at it.

British, and aims to demonstrate the seven special movements for each of the lower case letters of the alphabet.

This is done very well, and should lead to good letter writing habits. The 100 character set could allow a great deal of difficulty later.

The other program is Mr T's Letter Factory, which aims to teach letter recognition and reading.

This is an amazingly advanced program, but at this point has only a limited use.

The whole package would have been much more attractive if priced at a lower level.

instructions	4%
sound/see	9%
display	2%
value for money	9%



Wild Words Spectrum £7.95

Logosoft Software, Longmead House, Bury St, Histon, Cambs.

It all starts in an amusing and lighthearted game that gives students of school age and above practice in learning the vocabulary included over 200 words ranging from three to 14 letters and in the game setting rules are explained.

After a long loading sequence the screen of two rows, four and a seven started. However, the words are not printed in the screen, but only the letters. The words are displayed briefly, then again, then to fall

them a message that writing again the top of the screen.

To reach the five hour before close of play to help you. The key to reach the required letter is the character, when defined in the screen, any other letter is hidden. Change on the board?

What has that been explained the word a new piece, the screen grows, and a new word appears. For those words now on the screen the letters fall.

At the end of the program the screen says "Thank you". And that's all you have any choice to do.

instructions	10%
sound/see	10%
display	10%
value for money	10%



Mr T's Measuring Comes 32K BBC £12.95

Elmer Software, 73 Broadwalk St, London W1V 2BP

The little children I've seen have left a considerably high standard. Look on the picture presented on the pack, and the description.

The first game covers comparisons of size. It allows for the size of the objects to be shown, but two objects are shown. The size of each change size. The aim is to see where they are the same.

The program is good, with a variety of items that are used to measure. Cards and so on. The second game offers three elements on the screen of

Changing Unit Games. Aimed at a top having to make a list of items with single units to be within a given size.

The second stage involves placing the items in order of size on the screen. The third part involves all of these elements.

Both programs provide the sort of repetition needed to provide children in standard form skills on a substantial set of simple skills on the screen.

The children equipped provide the game and found to be of little enjoyment then.

instructions	10%
sound/see	10%
display	1%
value for money	10%



Robot Runner Spectrum £7.95

Logosoft Software, Longmead House, Bury St, Histon, Cambs.

Robot Runner is a challenging game of speed and skill. It is designed to give children of six years and above practice in the two to four letters table.

The object of the game is to help Robot Runner to escape to escape the monsters of Ender which let on the far side of the divided-screen ways of Robot.

Choosing three or four letters of the screen of multiple letters. The child has to work on the screen, and pressing T at 4, one can or discover the value displayed to the control value before moving. Robot Runner into the first

number way.

And there's a catch. On the control panel the things looking rather like spiders which are robots. They are one set of data and you have to start again.

To reach the screen from the last number you can have to press Robot Runner into a screen that without hitting a well good ball, keeping a look out for those spiders.

A nice thought and original game with superb graphics and speed of play. Robot Runner should give hours of amusement. My only wish was that I thought a new game.

instructions	10%
sound/see	10%
display	10%
value for money	10%



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